

IN THE SPECIFICATION

ABSTRACT

Disclosed are transgenic plants having edible portions that produce methional during processing. The plants contain increased methionine levels such that upon processing of the edible portion(s), methional levels are increased and lead to food products that possess improved flavor stability and/or quality. Plants of the *Solanaceous* family e.g., potato, tomato and eggplant, and other methional-producing plants including maize and soybean, are preferred plants. Several ways of genetically engineering plants to produce increased free Met levels are disclosed, with introduction of a non-native nucleic acid encoding cystathionine gamma synthase (CGS) and tissue-specific expression of an anti-sense S-adenosyl-methionine synthetase being preferred. Also disclosed are methods for selecting transformed plant cells using ethionine and CGS as the selection agent and marker gene respectively.